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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,780	08/10/2001	Wouter Dehandschutter	1585/A26	5444

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BROMBERG & SUNSTEIN LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

EXAMINER

D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 07/26/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/927,780	DEHANDSCHUTTER, WOUTER	
	Examiner	Art Unit	
	Stephen M. D'Agosta	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☒ Claim(s) 1-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification of in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)).

Drawings

The drawings were received on 8-10-2001 and have been reviewed by the draftsperson and examiner.

- It appears that all drawings should be labeled PRIOR ART since they are discussed in the Background Section and disclose prior technical work.
- The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the improvement for the echo control system must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be

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avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The specification is objected to because it does not refer to a figure in the Detailed Description Section that literally shows the applicant's invention. The applicant should show a (new) figure/diagram and describe it in the specification Detailed Description Section – the new figure should show how the algorithm is located/implemented in an echo canceller as per a description in the specification.

No new matter should be entered.

3. The examiner believes that there is a reference to Figure 4 on page 6, Line 10 but there is no "Figure Number" written. Correction is required.

Claim Objections

1. **Claims 1 and 9** objected to because of the following informalities: The word "type" is used in these claims which is vague since it does not provide a "definite" description of the claimed invention (eg. the examiner suggests removing this word). Appropriate correction is required. Failure to correct will lead to a USC 112 rejection.

Since claims 1 and 9 are objected to, claims 2-8 and 10-16 are also objected to as well based on their dependencies.

2. **Claims 10-16** objected to because of the following informalities: These claims are identical copies of claims 2-8 but their dependencies were not changed to depend on/from claim 9 (eg. a cut/paste error). Please fix their dependencies.

Allowable Subject Matter

Claims 1-16 will be allowed if/when the above stated issues are corrected.

The following is a preliminary examiner's statement of reasons for allowance: The examiner performed an exhaustive search and was unable to find prior art (or a combination of prior art) that read on the application's "improvement". Specifically, the examiner believes the novelty to be the detailed design that comprises an adaptive control module determining:

- a reference signal weight for the weighted sum WHICH IS proportional to the far signal reference and an estimate of the norm of an echo canceller error vector AND inversely proportional to an estimate of a residue of the echo canceller AND uses a non-linear normalized convergence term in the Normalized Least Mean Square (NLMS) algorithm.
- The examiner notes that this improvement relates to the applicant's equations as described on page 7, L27 to page 8, L19. These equations (and inherent output calculations) were not disclosed in prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Dal Farra et al. US 6,178,162
2. Hagiwara US 4,852,161
3. Haneda et al. US 5,539,731
4. Romesburg et al. US 6,173,056
5. Boudy et al. US 5,848,151
6. McCaslin et al. US 5,668,794
7. Armbruster US 5,644,635
8. Flanagan et al. US 6,09,083
9. Hemkumar et al. US 6,212,273
10. Ford US 5,016,271

11. Umemoto et al. US 5,636,323
12. Takada et al. US 6,181,753
13. Benesty US 6,694,020
14. Cole US 6,633,894
15. Johnson et al. US 6,047,025
16. Sih US 5,644,596

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta

